



**Mobile Bay National Estuary Program
Science Advisory Committee Meeting
5 Rivers Delta Resource Center, Blakeley Classroom
Friday, May 16, 2014
10:00 a.m. - Noon**

Telecon: 1-888-848-0190 Passcode: 6307392

Agenda

1. Overview/Review of March 14 Science Advisory Committee Meeting and approval of minutes.
2. Presentation and discussion of MBNEP SAC Five-year Strategy for CCMP – Mike Dardeau, DISL
3. Formal Approval of MBNEP SAC Five-year Strategy
4. Preview of June 13 SAC Meeting – Tim Thibaut, Barry A. Vittor and Associates
Where we are and where we are going...
5. Adjourn

Minutes of the Meeting of the MBNEP Science Advisory Committee (SAC)

5 Rivers Delta Resource Center, Blakely Classroom

Friday, May 16, 2014

In attendance: Dr. Just Cebrian (DISL), Renee Collini (DISL), Mike Dardeau (DISL), Carol Dorsey (AL Dept of Public Health), Steve Heath (ADCNR-MRD), Steve Jones (GSA), Latif Kalin (Auburn), Tim Thibault (Barry Vittor and Associates), Bill Walton (Auburn), Roberta Swann (MBNEP), Linda Sierke, and Tom Herder (MBNEP) – via Webex: Alex Beebe (USA), Dennis Devries (Auburn University) and Dr. Rusty Wright (Auburn University)

Tom Herder provided a brief overview of the February 13 meeting that featured Dr. Bill Fisher's presentation describing development of a biological condition gradient for the coral reefs of Puerto Rico, described the goals of today's meeting – refinement and approval of a five-year plan for the 2013-2018 CCMP, and asked Mike Dardeau to assume the floor as the draft five-year plan was projected on the screen.

Mike commented on baseline data, problems acquiring it, and a strategy for proceeding without it. He reviewed the goal (Improve understanding of how the estuarine ecosystem responds to anthropogenic stressors) and objective (Maintain/improve existing level of coastal monitoring) of SAC-1. He began listing suggested activities, beginning with "Establish coastal data management center," "Identify funding and organizations to query various agencies on a regular basis for background estuarine data," and "conduct high resolution mapping of habitats within the estuary to establish present-day baseline of distribution and coverage, and continue to monitor." Mike expressed that mapping is a "no brainer" and should be conducted every three to five years or as frequently as appropriate. He touted the communicability of maps to the broad NEP audience. Tom Herder conveyed a message from Dr. Joe Spruce of NASA, who hopes the "discussion includes the potential of satellite-based mapping and monitoring of coastal habitat for augmenting what can be obtained with aerial and ground-based methods and products." Dr. Spruce strongly feels that given the higher cost of high-res products, the use of Landsat or coarser resolution satellite data as complementary/supplementary tools has great potential.

The discussion turned towards the roles of the NOAA National Coastal Data Development Center and other data management portals as "coastal data management centers." Roberta Swann said that the MBNEP should not set up its own system but should instead work with other agencies (like the NCDDC and Gulf Coast Ocean Observing System) to support standardization of data. Mike said that GCOOS, GOMA, and GoMERC are all working on establishing themselves as "go to" agencies for management of data pertaining to blue water, brown water/estuarine, state regulations. Dr. Just Cebrian felt that we need a point of contact to ensure good management and effective data transfer. Roberta wondered if data transfer to an appropriate management center might be a role of the DISL. Mike responded by providing a historic overview of how DISL began writing metadata, and Just added that there are two people doing this at DISL – Lei and Mimi.

The discussion turned to metadata, and Carol Dorsey noted that data managers like NCDDC, GCOOS, and the GoM Network will have to decide on a common format for metadata. She encouraged MBNEP to work with NCDDC to understand their prescribed style in order to coach

others. Mike said that DISL had been doing that. Dr. Alex Beebe felt like “we were getting into the weeds” and recommended stepping back and asking what was realistic for the next five years – perhaps improved infrastructure and data management.

Steve Heath was critical of attempting to attribute data management to a single center or portal, since blue water needs are different than estuarine needs, etc. He suggested that we should aim at facilitating access to data by encouraging registry.

Under the Goal/Objective, “Establish process for measuring change in biological condition” and “Build a Biological Condition Gradient Framework for the estuary,” there was some discussion about stress description and specificity (% impervious cover vs. land disturbance indices). Roberta noted that the EPA favors narrowing focus to the HUC-12 level. After some discussion about potential attributes for measuring condition (e.g., ecosystem metabolism, chlorophyll a, parasite loads in killifish, biotic response to sedimentation) under “define/refine indicators of ecosystem health,” it was generally agreed that the suggested activities under “Build a biological condition gradient” could be best captured using define, refine, or construct.

Ashley McDonald’s work quantifying provision of ecosystem services was briefly discussed, and Roberta suggested that the restoration of streams in the D’Olive Watershed have provided an opportunity to isolate one project and its role in improving delivery of services by facilitating re-establishment of SAV beds where they previously existed, one of the underlying justifications for obtaining NFWF funding for project implementation. It was generally agreed that this was a good activity to include under “Improve understanding of relationship between biological condition of estuarine system and provision of ecosystem services” and “manage system for multiple services.”

The outcome of the five-year SAC plan was discussed. “Swimmable, Fishable, and Drinkable Waters” drew some criticism for the inclusion of “drinkable,” which is not a service provided by or expected of estuarine waters. Roberta suggested, “Improve the Mobile Bay estuary’s ability to provide essential ecosystem services,” to general agreement by SAC participants.

Tim Thibault provided a bit of background on activities leading up to the development of a BCG framework for the estuary, including the original monitoring plan, indicator workshops, Tamp Bay’s Restore the Balance protocol, before efforts began to focus on ecosystem services. He reiterated the effort by which a suite of critical coastal habitats were analyzed to evaluate the effects of a suite of anthropogenic stressors on the provision of a suite of ecosystem services. The process determined that freshwater wetlands; intertidal marshes and flats; and rivers, streams, and associated riparian areas were the habitats most affected by stressors impacting ecosystem service provision.

He recommended high resolution mapping and then development of quality indices for the two wetland habitat types. He said that mapping would be a “one time shot” but that quality assessment would take somewhat longer. For streams, an acceptable quality index has yet to be developed.

He asked, “what is the ideal estuarine indicator?” He felt that it must be sedentary and applicable at a range of locations. “Different indices for different locations” was a viable option, and he noted that wetlands indices already exist for Alabama.

Roberta asked Tom Herder to describe BCG development in northern AL streams, and he explained that taxonomic distribution of species based upon tolerance to environmental stress was used for that GSA/ADEM effort. He cautioned that this was probably not appropriate for the estuary, because all estuarine organisms depend upon resiliency to stress. Steve Heath noted that resiliency in estuaries is programmed. No matter the stress imposed upon estuarine waters, flushing clears conditions in a matter of days, and estuarine organisms are characterized by resilience. He suggested that the organism most impacted by stress in an estuary is man.

Roberta reiterated an idea that she had previously voiced. Perhaps, given what Steve explained, the best way of measuring estuarine health might be the development of a gradient that focused on the watersheds that feed estuarine waters.

Tim Thibaut reiterated that a BCG must be based upon attributes related to habitat quality. As a goal, the BCG should be simple in its inception, with a capacity to add complexity with increased understanding and calibration. Roberta emphasized that we need to retain what Steve Heath just explained.

Mike stressed that the effort must be broadly defensible, and Tim added that the public understands the importance of habitat quality.

The meeting was adjourned at 12:10 p.m.